

ABSTRACT OF THE DISCLOSURE

Methods and apparatuses for discriminating matter utilizing dielectrophoresis combined with magnetophoresis. A sample having one or more constituents is injected into an inlet port of a chamber. A carrier medium flow is initiated at the inlet port to establish a flow within the chamber. A dielectrophoretic force is generated to act on the constituents of the sample. A magnetophoretic force is generated to act on the constituents of the sample. The dielectrophoretic force and magnetophoretic forces are balanced to position the constituents within the chamber. The constituents are then collected at one or more outlet ports of the chamber according to the dielectric and magnetic characteristics of the constituents. The constituents may be collected as a function of time-of-exit from the chamber and/or position within the chamber.

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